**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of restarting a temperature swing adsorption (TSA) apparatus which purifies feed air for a cryogenic air separation plant, comprising:

~~in the case where the TSA apparatus was stopped when or after when~~providing a regeneration process including measuring a temperature of a purge gas which flows out from a first adsorption column ~~during a regeneration process became~~to determine when a purge gas temperature reaches a peak temperature in the regeneration process,

stopping the TSA apparatus when the purge gas temperature reaches the peak temperature;

~~in the first adsorption column during the regeneration process,~~ sealing by closing, at the time of stopping the TSA apparatus, an entrance valve, an exit valve, and an atmosphere-releasing valve in the first adsorption column during the regeneration process;

~~in a second adsorption column during an adsorption process,~~ sealing by closing an entrance valve and an exit valve and opening an atmosphere-releasing valve in a second adsorption column during an adsorption process, so as to release a gas in the opposite direction to feed air flow, followed by closing the atmosphere-releasing valve;

pressurizing, just before a restart, the second adsorption column with the feed air to a pressure necessary for the adsorption process; ~~and~~

restarting the TSA apparatus; and

performing, after the restart, the regeneration process in the first adsorption column and the adsorption process in the second adsorption column continuously from the time point of stopping the TSA apparatus, wherein

the stop of the TSA apparatus includes an urgent stop and a planned stop.

2. (Original) A method of restarting a TSA apparatus according to claim 1, wherein the feed air which is fed to the TSA apparatus has a temperature of 5°C to 45°C and a pressure of 400 to 1,000 kPa (absolute pressure).

3. (Currently Amended) A method of restarting a temperature swing adsorption (TSA) apparatus which purifies feed air for a cryogenic air separation plant, comprising:

~~in the case where an elapsed time $t_1$ of~~providing a regeneration process in a first adsorption column~~at the time point of~~ stopping the TSA apparatus when the elapsed time $t_1$ satisfies the following formula~~ in a first adsorption column during the regeneration process~~,

$$t_1 < t_2 - (R_1 / R_2) \times (t_2 - t_3)$$

$t_1$: the elapsed time of the regeneration process (min)

$t_2$: a time of the regeneration process (min)

$t_3$: a time of a pressurizing step (min)

$R_1$: a flow rate of a purge gas ($Nm^3$/hour)

$R_2$: a flow rate of the feed air ($Nm^3$/hour)

~~in the first adsorption column during the regeneration process,~~ sealing by closing, at the time of stopping the TSA apparatus, an entrance valve, an exit valve, and an atmosphere-releasing valve in the first adsorption column during the regeneration process;

~~in a second adsorption column during an adsorption process,~~ sealing by closing an entrance valve and an exit valve and opening an atmosphere-releasing valve in a second adsorption column during an adsorption process, so as to release a gas in the opposite direction to feed air flow, followed by closing the atmosphere-releasing valve;

pressurizing, just before a restart, the second adsorption column with the feed air to a pressure necessary for the adsorption process;

restarting the TSA apparatus;

performing, after the restart, the regeneration process in the first adsorption column and the adsorption process in the second adsorption column from the beginning of each process while blocking purified air flow from the TSA apparatus to an air separation section; and

starting to feed purified air to the air separation section, wherein

the stop of the TSA apparatus includes an urgent stop and a planned stop.

4. (Original) A method of restarting a TSA apparatus according to claim 3, wherein the adsorption process is performed with the flow rate of the feed air corresponding to the flow rate of the purge gas necessary for the regeneration process of the adsorption column after the restart before starting to feed the purified air to the air separation section.

5. (Original) A method of restarting a TSA apparatus according to claim 3, wherein the feed air which is fed to the TSA apparatus has a temperature of 5°C to 45°C and a pressure of 400 to 1,000 kPa (absolute pressure).

6. (Currently Amended) A method of restarting a temperature swing adsorption (TSA) apparatus which purifies feed air for a cryogenic air separation plant, comprising:

~~in a first adsorption column during a regeneration process,~~ sealing by closing, at the time of stopping the TSA apparatus, an entrance valve, an exit valve, and an atmosphere-releasing valve in a first adsorption column during a regeneration process;

~~in a second adsorption column during an adsorption process,~~ sealing by closing an entrance valve and an exit valve and opening an atmosphere-releasing valve in a second adsorption column during an adsorption process, so as to release a gas in the opposite direction to feed air flow, followed by closing the atmosphere-releasing valve;

pressurizing, just before a restart, the second adsorption column with the feed air to a pressure necessary for the adsorption process;

restarting the TSA apparatus;

performing, after the restart, the regeneration process in the first adsorption column and the adsorption process in the second adsorption column ~~from the time point of stopping the TSA apparatus~~ and then switching the processes to perform the adsorption process in the first adsorption column and the regeneration process in the second adsorption column once while blocking purified air flow from the TSA apparatus to an air separation section; and

starting to feed purified air to the air separation section, wherein

the stop of the TSA apparatus includes an urgent stop and a planned stop.

7. (Original) A method of restarting a TSA apparatus according to claim 6, wherein the adsorption process is performed with the flow rate of the feed air corresponding to the flow rate

of the purge gas necessary for the regeneration process of the adsorption column after the restart before starting to feed the purified air to the air separation section.

8. (Currently Amended) A method of restarting a temperature swing adsorption (TSA) apparatus which purifies feed air for a cryogenic air separation plant, comprising:

distinguishing the time point of stopping the TSA apparatus in the following three cases i), ii), and iii):

i) a case ~~in which the TSA apparatus was stopped when or after when~~of providing a regeneration process including measuring a temperature of a purge gas which flows out from a first adsorption column ~~during a regeneration process became~~to determine when a purge gas temperature reaches a peak temperature in the regeneration process,

ii) a case ~~in which an elapsed time $t_1$ of the~~of providing a regeneration process in a first adsorption column~~at the time point of~~ stopping the TSA apparatus when the elapsed time $t_1$ satisfies the following formula ~~in the first adsorption column during the regeneration process~~, and

$$t_1 < t_2 - (R_1 / R_2) \times (t_2 - t_3)$$

$t_1$: the elapsed time of the regeneration process (min)

$t_2$: a time of the regeneration process (min)

$t_3$: a time of a pressurizing step (min)

$R_1$: a flow rate of the purge gas ($Nm^3$/hour)

$R_2$: a flow rate of the feed air ($Nm^3$/hour)

iii) a case other than the cases i) and ii);

in the case i), stopping the TSA apparatus when the purge gas temperature reaches the peak temperature,

~~in the first adsorption column during the regeneration process,~~ sealing by closing, at the time of stopping the TSA apparatus, an entrance valve, an exit valve, and an atmosphere-releasing valve in the first adsorption column during the regeneration process,

~~in a second adsorption column during an adsorption process,~~ sealing by closing an entrance valve and an exit valve and opening an atmosphere-releasing valve in a second adsorption column during an adsorption process, so as to release a gas in the opposite direction to feed air flow, followed by closing the atmosphere-releasing valve,

pressurizing, just before a restart, the second adsorption column with the feed air to a pressure necessary for the adsorption process, ~~and~~

restarting the TSA apparatus, and

performing, after the restart, the regeneration process in the first adsorption column and the adsorption process in the second adsorption column continuously from the time point of stopping the TSA apparatus;

in the case ii), ~~in the first adsorption column during the regeneration process,~~ sealing by closing, at the time of stopping the TSA apparatus, the entrance valve, the exit valve, and the atmosphere-releasing valve in the first adsorption column during the regeneration process,

~~in the second adsorption column during the adsorption process,~~ sealing by closing the entrance valve and the exit valve and opening the atmosphere-releasing valve in the second adsorption column during the adsorption process, so as to release the gas in the opposite direction to the feed air flow, followed by closing the atmosphere-releasing valve,

pressurizing, just before the restart, the second adsorption column with the feed air to the pressure necessary for the adsorption process,

restarting the TSA apparatus,

performing, after the restart, the regeneration process in the first adsorption column and the adsorption process in the second adsorption column from the beginning of the each process while blocking purified air flow from the TSA apparatus to an air separation section, and

starting to feed purified air to the air separation section; and

in the case iii), ~~in the first adsorption column during the regeneration process,~~ sealing by closing, at the time of stopping the TSA apparatus, the entrance valve, the exit valve, and the atmosphere-releasing valve in the first adsorption column during the regeneration process,

~~in the second adsorption column during the adsorption process,~~ sealing by closing the entrance valve and the exit valve and opening the atmosphere-releasing valve in the second adsorption column during the adsorption process, so as to release the gas in the opposite direction to the feed air flow, followed by closing the atmosphere-releasing valve,

pressurizing, just before the restart, the second adsorption column with the feed air to the pressure necessary for the adsorption process,

restarting the TSA apparatus,

performing, after the restart, the regeneration process in the first adsorption column and the adsorption process in the second adsorption column ~~from the time point of stopping the TSA apparatus~~ and then switching the processes to perform the adsorption process in the first adsorption column and the regeneration process in the second adsorption column once while blocking the purified air flow from the TSA apparatus to the air separation section, and

starting to feed the purified air to the air separation section, wherein

the stop of the TSA apparatus includes an urgent stop and a planned stop.

9. (Original) A method of restarting a TSA apparatus according to claim 8, wherein in the cases ii) and iii), the adsorption process is performed with the flow rate of the feed air corresponding to the flow rate of the purge gas necessary for the regeneration process of the adsorption column after the restart before starting to feed the purified air to the air separation section.